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954861



PATENT SPECIFICATION

DRAWINGS ATTACHED

954861

Inventor: HUBERT SYDNEY HILL

Date of filing Complete Specification: Sept. 18, 1962.

Application Date: Sept. 25, 1961.

No. 34184/61.

Complete Specification Published: April 8, 1964.

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Index at acceptance:—F2 P (1A32, 34); F2 G1A

International Classification:—F 06 I

COMPLETE SPECIFICATION

Improved Rain Water or like Fitting

ERRATUM

SPECIFICATION No. 954,861

Page 1, line 81, for "ffiont" read "joint"

THE PATENT OFFICE

2nd June 1964

10 **WATER OR LIKE FITTING.**
Several rainwater systems have previously
been proposed wherein the elements thereof
are constructed wholly or in part from syn-
15 thetic resinous materials, commonly referred
to as "plastics". In the majority of these
systems, however, conventional fixing means
have been adapted for securing many of the
elements to the supporting surfaces of build-
ing carrying system. For instance, in fixing
20 downspouts it has been fairly common prac-
tice to use the form of encircling clip which
was previously employed for metallic rain-
water systems, wherein the clip and the pro-
jecting lugs carrying the screws or studs for
25 attaching the clip to the supporting surface
are clearly visible to an observer of the
system.

It has been found that with rainwater
systems constructed from so-called "plastic"
30 materials it is possible to facilitate fixing of
the various elements to the supporting sur-
faces in a more discreet manner, i.e. one
which is not readily visible to an onlooker
and which consequently presents a more
35 pleasing appearance. This is obviously desir-
able both architecturally and aesthetically.

According to the present invention a rain-
water or the like fitting moulded from a syn-
thetic resinous material comprises an integral
40 protuberance formed on the outer face of an
article, and a separate fixing bracket adapted
for attachment to a supporting surface, the
protuberance and the bracket being of sub-
stantially the same width, of a width less than
45 that of the article, and shaped complement-

[Pri

in the top of a fixed bracket and to be slid
home by a limited amount to bring the two
elements into an engaged position wherein the
weight of the article will serve to hold the
parts locked together.

The article may be a rainwater shoe, a pipe
coupling or a pipe socket.

The invention will now be further described
by way of example with reference to the
drawings accompanying the Provisional Speci-
fication, in which drawings:—

Figs. 1, 2 and 3 are perspective, rear and
plan views respectively of a rainwater shoe
according to the present invention;

Figs. 4, 5 and 6 are similar views of a pipe
coupling according to the present invention;

Figs. 7, 8 and 9 are similar views of a pipe
socket according to the present invention, and

Fig. 10 is a fixing bracket adapted to form
a complete fitting with one or other of the
items shown in Figs. 1 to 9.

Referring to Figs. 1 to 3, it will be seen
that a rainwater shoe of standard construction
is moulded to provide an integral protuberance
on the outer surface. This protuberance is
shaped as the male member of a tapered
dove-tail joint.

A fixing bracket (Fig. 10) has means such
as a central recessed opening whereby it may
be mounted, for instance by a screw, stud,
nail or the like, to a supporting surface. The
bracket is shaped to present the female mem-
ber of a tapered dovetail joint.

It will be readily appreciated that the pro-
tuberance of the rainwater shoe shown in
Figs. 1 to 3 may be engaged in the upper



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COMPLETE SPECIFICATION

Improved Rain Water or like Fitting

We, ALLIED STRUCTURAL PLASTICS LIMITED, a British Company, of Tolpits, Watford, Hertfordshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention concerns an improved rain-water or the like fitting.

Several rainwater systems have previously been proposed wherein the elements thereof are constructed wholly or in part from synthetic resinous materials, commonly referred to as "plastics". In the majority of these systems, however, conventional fixing means have been adapted for securing many of the elements to the supporting surfaces of building carrying system. For instance, in fixing downspouts it has been fairly common practice to use the form of encircling clip which was previously employed for metallic rainwater systems, wherein the clip and the projecting lugs carrying the screws or studs for attaching the clip to the supporting surface are clearly visible to an observer of the system.

It has been found that with rainwater systems constructed from so-called "plastic" materials it is possible to facilitate fixing of the various elements to the supporting surfaces in a more discreet manner, i.e. one which is not readily visible to an onlooker and which consequently presents a more pleasing appearance. This is obviously desirable both architecturally and aesthetically.

According to the present invention a rainwater or the like fitting moulded from a synthetic resinous material comprises an integral protuberance formed on the outer face of an article, and a separate fixing bracket adapted for attachment to a supporting surface, the protuberance and the bracket being of substantially the same width, of a width less than that of the article, and shaped complement-

arily whereby the two elements can be slid or snapped into engagement one with the other enabling the article to be mounted on any supporting surface to which the bracket has been attached. Conveniently, the protuberance and the bracket are formed as the two elements of a dovetail joint, which may be tapered in a longitudinal and vertical direction, enabling the protuberance to be located in the top of a fixed bracket and to be slid home by a limited amount to bring the two elements into an engaged position wherein the weight of the article will serve to hold the parts locked together.

The article may be a rainwater shoe, a pipe coupling or a pipe socket.

The invention will now be further described by way of example with reference to the drawings accompanying the Provisional Specification, in which drawings:—

Figs. 1, 2 and 3 are perspective, rear and plan views respectively of a rainwater shoe according to the present invention;

Figs. 4, 5 and 6 are similar views of a pipe coupling according to the present invention;

Figs. 7, 8 and 9 are similar views of a pipe socket according to the present invention, and

Fig. 10 is a fixing bracket adapted to form a complete fitting with one or other of the items shown in Figs. 1 to 9.

Referring to Figs. 1 to 3, it will be seen that a rainwater shoe of standard construction is moulded to provide an integral protuberance on the outer surface. This protuberance is shaped as the male member of a tapered dove-tail fljoint.

A fixing bracket (Fig. 10) has means such as a central recessed opening whereby it may be mounted, for instance by a screw, stud, nail or the like, to a supporting surface. The bracket is shaped to present the female member of a tapered dovetail joint.

It will be readily appreciated that the protuberance of the rainwater shoe shown in Figs. 1 to 3 may be engaged in the upper

opening of the bracket shown in Fig. 10 and the two members slid into engagement whereby the shoe will be firmly held by virtue of its own weight.

5 The integral protuberance of the pipe coupling of Figs. 4 to 6 and that of the pipe socket of Figs. 7 to 9, co-operate with the bracket of Fig. 10 in a similar manner and thereby afford support not only to the fittings themselves but to any pipes carried thereby.

It will be seen that the protuberances of the various fittings and the bracket are of substantially the same width, and that this measurement is less than the width or diameter of the fitting. In this way the fixing means for the fitting is hidden by the fitting when it is secured in position, for instance on a wall, as no ears, flanges or plates extend beyond the sides of the fitting at the fixing or mounting point.

As an alternative to the dovetail joint connection referred to above and shown in the drawings, a ball and socket arrangement could be employed, the protuberance on the rear outer face of the article then being in the form of a ball mounted on the end of a shank or rib. This arrangement has the advantage that the fitting can be mounted well clear of the supporting surface, if necessary for any reason, by arranging for the shank or rib to be of a length equal to the desired clearance.

The fittings of the present invention may be moulded from any suitable synthetic resinous material such as polyvinyl chloride compound. Moreover, the fittings may be produced with, or without, fibrous reinforcement embedded within the resinous material.

WHAT WE CLAIM IS:—

40 1. A rainwater or the like fitting moulded from a synthetic resinous material comprising an integral protuberance formed on the outer face of the article, and a separate fixing bracket adapted for attachment to a supporting surface, the protuberance and the bracket being of substantially the same width, of a width less than that of the article and shaped complementarily whereby the two elements can be slid or snapped into engagement one with the other enabling the article to be mounted on any supporting surface to which the bracket has been attached.

50 2. A rainwater or the like fitting as claimed in claim 1 wherein the protuberance and the

bracket are formed as two elements of a dovetail joint. 55

3. A rainwater or the like fitting as claimed in claim 2 wherein the dovetail joint is tapered in a longitudinal and vertical direction to enable the protuberance to be located in the top of the bracket and to be slid home by a limited amount to bring the two elements into an engaged position wherein the weight of the article will serve to hold the parts locked together. 60 65

4. A rainwater or the like fitting as claimed in claim 1, 2 or 3, wherein the article is in the form of a rainwater shoe, and the protuberance on the outer surface thereof is in the form of a tapered dovetail joint. 70

5. A rainwater or the like fitting as claimed in claim 1, 2 or 3, wherein the article is in the form of a pipe coupling and the protuberance on the outer surface thereof is in the form of a tapered dovetail joint. 75

6. A rainwater or the like fitting as claimed in claim 1, 2 or 3, wherein the article is in the form of a pipe socket and the protuberance on the outer surface thereof is in the form of a tapered dovetail joint. 80

7. A rainwater or the like fitting according to any one of claims 4 to 6 wherein the fixing bracket is shaped to present the female member of a tapered dovetail joint and has means such as a central recessed opening whereby it may be attached by means of a screw, stud, nail or the like to a supporting surface. 85

8. A rainwater or the like fitting as claimed in claim 1 wherein the article and the bracket are provided with the elements of a ball and socket arrangement for engagement one with the other. 90

9. A rainwater or the like fitting as claimed in any preceding claim wherein the article and the bracket are formed from a polyvinyl chloride compound. 95

10. A rainwater or the like fitting according to any previous claim wherein a fibrous reinforcement is embedded within the synthetic resinous material. 100

11. Rainwater or the like fittings substantially as herein described with reference to and as illustrated in the drawings accompanying the Provisional Specification.

W. P. THOMPSON & CO.,
12, Church Street, Liverpool, 1.
Chartered Patent Agents.

954861
3 SHEETS

PROVISIONAL SPECIFICATION
*This drawing is a reproduction of
the Original on a reduced scale*
Sheet 1

FIG.1.

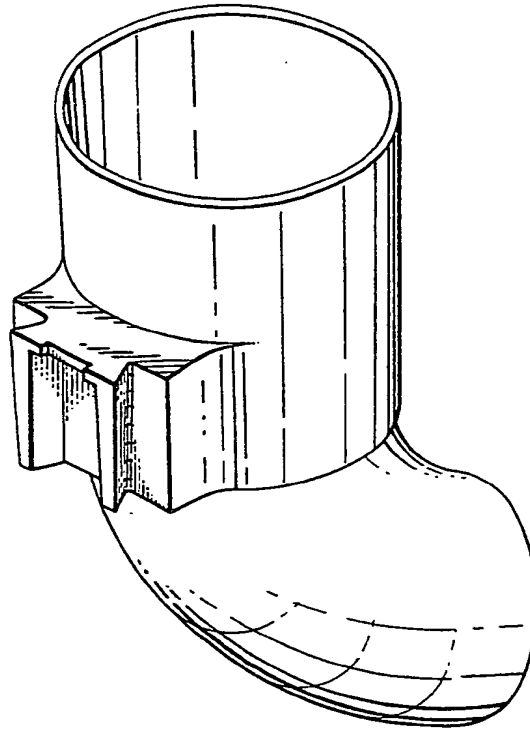


FIG.2.

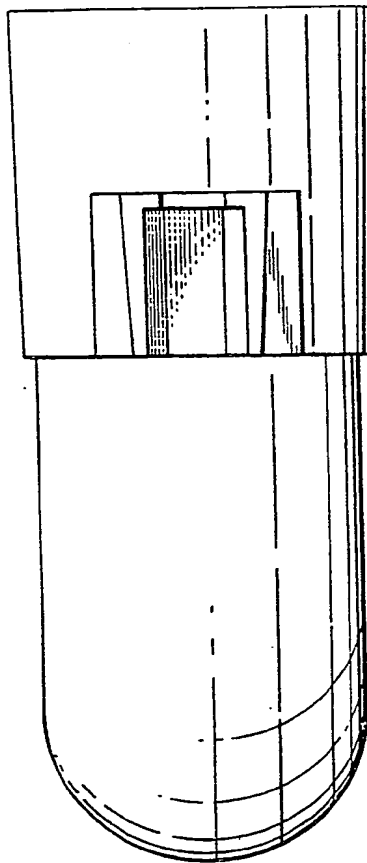
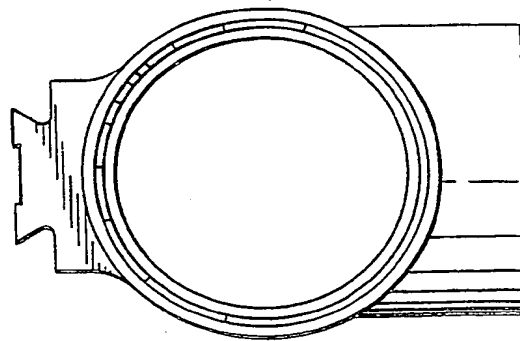


FIG.3.



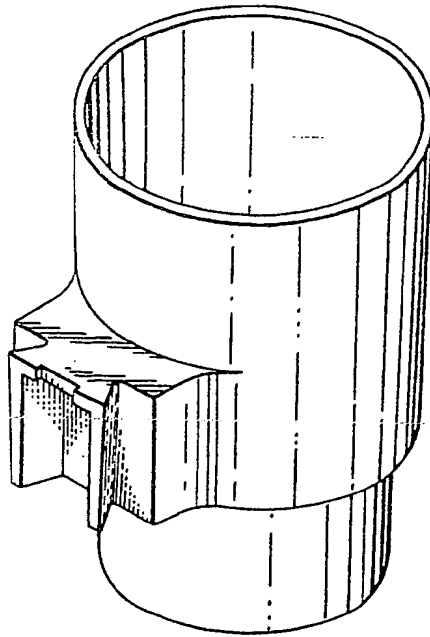


FIG. 4.

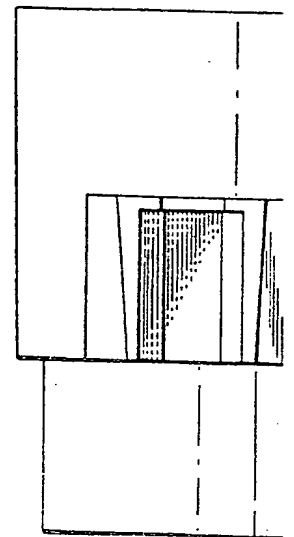
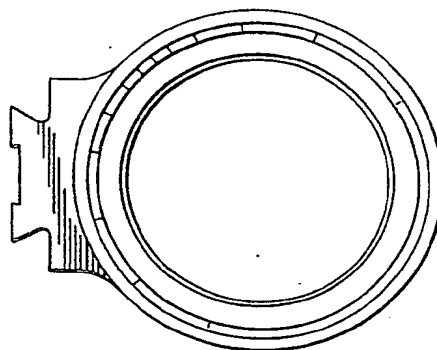


FIG. 5.

FIG. 6.



954861
3 SHEETS

PROVISIONAL SPECIFICATION
*This drawing is a reproduction of
the Original on a reduced scale
Sheets 2 & 3*

4.

FIG.5.

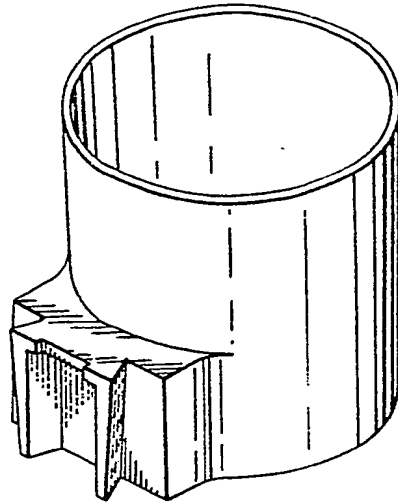
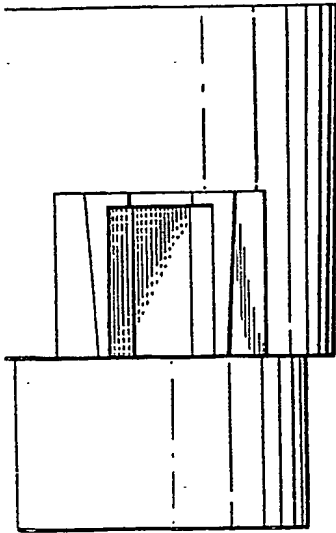


FIG.7.

FIG.9.

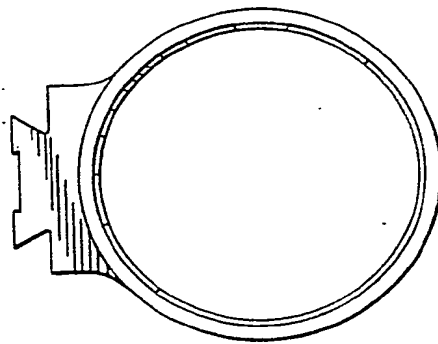


FIG.8.

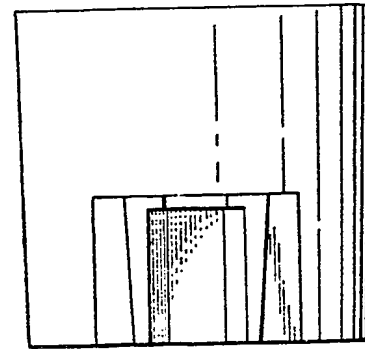
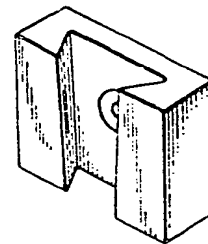


FIG.10.



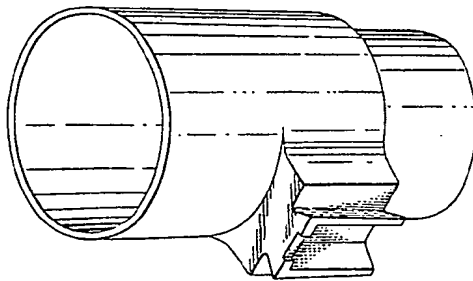


FIG. 4.

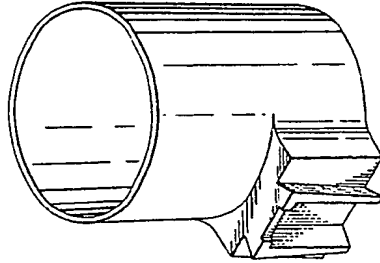


FIG. 7.

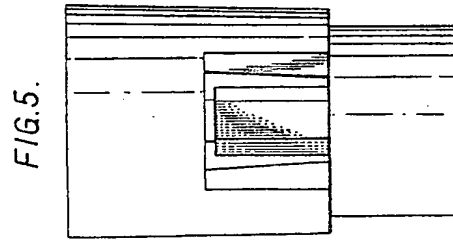


FIG. 5.

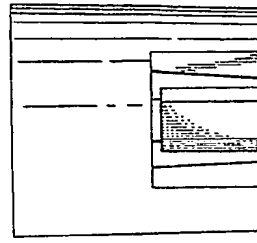


FIG. 8.

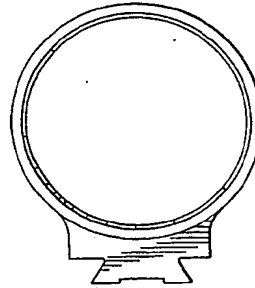


FIG. 9.

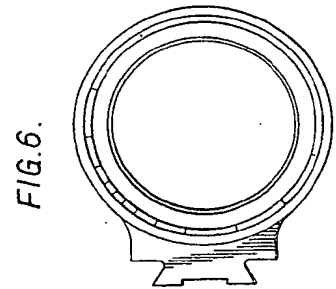


FIG. 6.

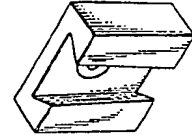


FIG. 10.

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